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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,715	01/23/2004	James Frank Amara	A4-085 US	7323

23683 7590 02/24/2005

MOLEX INCORPORATED  
2222 WELLINGTON COURT  
LISLE, IL 60532

EXAMINER
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HYEON, HAE M

ART UNIT	PAPER NUMBER
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2839

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/763,715		AMARA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Hae M. Hyeon		2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date: _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because the abstract recites, "The cross-sectional configuration of the crimp section and the cross-sectional configuration of the through passages in the end cap **are such that** the terminals are prevented from rotating as the crimp section passes through the through passages in the end cap." It is not clear what it means, "**such that**." Correction is required. See MPEP § 608.01(b).
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

An invention is about improvement, but what is improved in the instant invention. It seems that it is more logical to state what is improved.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The independent claims recite that the crimp section prevents rotation of the terminal as the terminal is inserted into the terminal-receiving passages in the housing. Furthermore, the present specification explains that the crimp section of a terminal having a polygonal cross-

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sectional configuration that matches with a polygonal cross-sectional configuration of the through passage of an end cap to prevent rotation of the terminal. However, the present specification does not explain whether the crimp section retains the same polygonal cross-sectional configuration after it has been crimped around a wire. **Commonly when a crimp section of a terminal is crimped around a wire, cross-sectional configuration of the crimp section changes because the crimp section is usually pressed and bent around the wire.** The drawings of the instant invention only show the cross-sectional configuration of the crimp section before crimping around a wire. Also, a terminal is inserted in a connector after the crimp section of the terminal is attached to a wire. Therefore, it is not clear whether the cross-sectional configuration of the crimp section of the instant invention **remains the same** after the terminal is crimped around the wire. If the cross-sectional configuration of the crimp section of the instant invention does not remain the same after the crimp section is crimped around the wire, the cross-sectional configuration of the crimp section is not going to match with the cross-sectional configuration of the through passage of the end cap. Then, the crimp section cannot prevent rotation of the terminal. Thus, it is not clear what happens to the crimp section after it has been crimped around a wire.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 5-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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- The last paragraph of claim 5 recites, “the cross-sectional configuration of said crimp section of the terminals and the cross-sectional configuration of said through passages in the end cap **being such that** the terminals are prevented from rotating as the crimp sections pass through the through passages.” It is not clear what the phrase “being such that” is referring to about the crimp section and the through passages. Claim 1 recites that the cross-sectional configurations of the crimp section and the through passages are matching, but claim 5 does not recite clearly how they are related to each other.
- Claim 9 recites that the crimp section and the box section both are configured to prevent rotation of the terminal during an initial stage and a later stage of insertion of the terminal into the terminal-receiving passage in the housing. However, claims 9-12 do not recite how the crimp section and the box section prevent rotation of the terminal.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonavita et al (6,478,620 B1) in view of Bluemmel et al (6,059,616).

Bonavita discloses an electrical connector comprising a dielectric housing 12 including a front mating end 14, a rear termination end 16 and a plurality of terminal-receiving passages 20; an end cap 30 coupled to the rear termination end 16 and including a plurality of through

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passages 32 aligned with the terminal-receiving passages 20; and a plurality of conductive terminals 36 including a front contact end 36a, an reinforcing box L1, and a rear terminating end comprising a first crimp section 36e for crimping onto an outer insulation of an electrical wire 36f and a second crimp section 36d for crimping onto an inner conductor of the electrical wire 36f. Bonavita discloses that the reinforcing box L1 of the terminal 36 has a cross-sectional configuration (one-way footprint) matching with a cross-sectional configuration 34 of the through passages 32 to provide correct alignment of the terminal into the terminal-receiving passages 20. However Bonavita does not disclose the first crimp section 36e having the same cross-sectional configuration as the through passages 32 of the end cap 30.

Bluemmel discloses a crimp contact 1 comprising a crimp section 6 having the same cross-sectional configuration as a cross-sectional configuration of a reinforcing box section 3. Bluemmel teaches that the rectangular cross-sectional configuration of the crimp section 6 and the reinforcing box section 3 ensures the unproblematical loading of the individual contacts in the contact chambers (see column 1, lines38-45). Although Bonavita and Bluemmel do not state about preventing the rotation of the terminals as they are inserted into the terminal-receiving passages, it is inherent that the terminals of Bonavita and Bluemmel will prevent the rotation of the terminals because both terminals have a rectangular cross-sectional configuration.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the crimp section taught by Bonavita such that it would have a cross-sectional configuration matching with the cross-sectional configuration of a reinforcing box section as taught by Bluemmel because it would further ensures the unproblematical loading of the individual contacts in the contact chambers.

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*Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 6,217,394 B1 by Sugie, US Patent Application Publication No. 2002/0045388 A1 by Miwa, US Patent No. 6,375,501 B1 by Kojima, and US Patent No. 6,669,507 B2 by Yamanashi et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M. Hyeon whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on (571) 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hae M Hyeon  
Primary Examiner  
Art Unit 2839

hnh

*hnh*

*Hae Moon Hyeon*